

# HOMOPTERA OF THE WILLIAMS GALAPAGOS EXPEDITION.

BY HERBERT OSBORN.

The few species of Homoptera submitted for examination were collected by William Beebe in the Galapagos Islands, and are interesting as bringing to light a species long ago described by Stål with some closely related forms, and also a species of *Jassus* not hitherto known from these islands. The Williams Galapagos Expedition was sent out by the Department of Tropical Research of the New York Zoological Society.

## *Jassus galapagoensis* sp. nov.

Head broad, blunt; vertex, female, nearly twice as wide as long, narrower in male, faintly carinate; ocelli close to border, not sunken in pits; front narrow, rather faintly carinate; clypeus twice as long as width at base, expanding toward tip. Pronotum a little longer than vertex, minutely granulate.

*Genitalia:* Female, last ventral segment three times as long as preceding; hind border scarcely produced, faintly sinuate, strongly carinate. Male, plates very slender, widened a little toward tip, extended beyond tip of pygofer.

*Color:* Yellow, tinged with orange; border of front and middle of clypeus, orange or reddish. Pronotum and scutellum blackish, in the female with spots at anterior border of pronotum and borders of scutellum, yellowish; elytra mostly black in the male, but with broad discal stripe and claval nervures, blackish in the female; costa yellowish transparent—this including also most of outer apical areole; wings smoky; veins blackish. Beneath yellowish with black areas on the thorax and coxae; legs yellowish; tarsal claws blackish. In some individuals, especially in the males, there is a dense coppery or bronzy pruinose covering which gives the insect a greenish coppery appearance.

Length, female 8 mm.; male 6 mm.

Seven specimens, two females (type and paratype), four males (allotype and paratype), and one nymph, from Conway Bay, Indefatigable, Galapagos, April 1st, 1923, and James Islan, Galapagos, April 5th, 1923.

The females and males differ considerably in size, but agree closely in marking, except the extent of blackish on the elytra. There is however little question as to their belonging to the same species. The nymph has the vertex elongate, considerably longer than width at base, the borders of the front cinnabar red, extended on basal half of clypeus. The prothorax and mesothorax with large fuscous spots; anterior wing pads mostly fuscous; abdominal seg-

ment greenish yellow with fuscous patches at the sides. Beneath greenish; borders of abdomen tinged with reddish; legs greenish; femora with fuscous patches and a dark annulus near tip. The wing pads extend to base of second abdominal segment which would indicate a third or fourth instar. This species seems most closely related to some of the South American forms, especially *auratus* Fab., but does not agree with any species known to me, and it seems probable that it was derived from a South American source at so remote a period as to have formed a distinct species.

Genus *Philatis* Stål.

*Rio Jan. Hmip.* p. 68, 1858.

*Philatis productus* Stål.

*Mycterodus productus* Stål. *Eugenies Resa, Omkring, Jorden*, p. 278, 1853.

Stål described this species as from "Insulae Galapagenses, Callao, et Panama." Specimens from Tower Island agree very perfectly with his description. The female has the last complete ventral segment deeply indented each side of the middle and emarginate toward the border with the succeeding segment either hidden at the middle or divided by the base of ovipositor. The pygofer is short, compressed, upturned, the sub-anal plate flattened, narrowed posteriorly and bluntly rounded at tip. Male terminal segment twice as long as preceding; hind border concave; lateral angles reaching above base of the plates; plates closely appressed or fused, deeply spoon-shaped, narrowed to blunt tips extending beyond tip of pygofer.

Length 5 mm.

Two specimens, male and female, Tower Island, April 28th, 1923.

***Philatis cinerea* sp. nov.**

Smaller than *productus* and distinctly grayish in color with minute fuscous punctations, a light gray patch on the disk of elytra and a series of whitish cross veins next the claval suture.

Head produced, but not distinctly carinate; margins of vertex slightly elevated; margins of front thin, slightly reflexed. Pronotum short, a little more than half as long as vertex, narrowed at sides; elytra broad, convex; hind border obliquely truncate, nearly right-angled at tip of clavus; wings rudimentary.

*Genitalia:* Female, last complete segment indented each side near the middle, sinuate at the sides; succeeding segment with sides separated by ovipositor; pygofer short, compressed, scarcely produced upward at tip; sub-anal plate rather long; margins reflexed; tip bluntly rounded. Male, last ventral segment twice as long as the preceding; hind border truncate; plates fused; broadly carinate; tip contracted, blunt, exceeding pygofer.

*Color:* Dark gray; vertex and front tinged with green; body sprinkled with minute fuscous dots; a broad whitish patch on disk of elytra and a light area

bordering the clavus; outer border between veins distinctly fuscous. Abdomen above smoky, beneath somewhat greenish.

Length, to tip of elytra, female 5 mm.; male 4.5 mm.

Five specimens, three females, two males, Tower Island, April 28th, 1923.

***Philatis major* sp. nov.**

Larger than *productus*, with carina less distinct, and color more uniformly pale testaceous.

Head triangular; vertex depressed, without distinct carina at the middle; borders slightly raised; front without distinct carina; lateral margins thin, slightly expanded. Pronotum about half as long as vertex, angularly emarginate behind; elytral veins conspicuous, reticulate; costa broadly rounded; wings rudimentary.

*Genitalia*: Female, last complete segment shallowly indented near the middle, deeply sinuate each side; pygofer compressed, curved. Male, last ventral segment equal to preceding, these about three times as long as basal segments; plates narrowed, closely appressed, broadly carinate each side; tips blunt, extended beyond tip of pygofer.

*Color*: Pale testaceous; veins in the female faintly margined with fuscous; the costal and apical margin minutely dotted with fuscous. Abdomen of male below faintly tinged with greenish.

Length, to tip of elytra, female 6.5 mm.; male 5.5 mm.

Four specimens, two females and two males from Conway Bay, Indefatigable, Galapagos, April 1st, 1923.

This is one of the series of scientific papers of the Harrison Williams Galapagos Expedition, under the directorship of William Beebe, sent out by the Department of Tropical Research of the New York Zoological Society. The general account and narrative of the expedition, together with the natural history and photographs of the fauna, are embodied in a volume by William Beebe, published by G. P. Putnam's Sons, under the auspices of the Zoological Society. Its title is "Galapagos; World's End."